

Amendments to the Specification:

Please replace the paragraph beginning at page 3, line 11, as with the following amended paragraph:

--FIGS. 2a and 2b illustrate an implementation of a four-port PM circulator 100.

A1
Circulator 100 is coupled to four-optical fibers 10, 20, 30 and 40. Circulator 100 includes Polarization Beam Splitter ("PBS") 55, reflectors 54 and 58, non-reciprocal devices 26 and 36, and polarizers 24 and 34. Circulator 100 can optionally ~~includes~~ include isolators 12 and 42. For the convenience of the presentation, a coordinate with x, y and z axis is shown in FIGS. 2a and 2b.--

Please replace the paragraph beginning at page 3, line 16, as with the following amended paragraph:

A2
--Circulator 100 performs two functions. The first function is illustrated in FIG. 2a: light from optical fiber 10 entering ~~circular~~ circulator 100 with the x-polarization is directed to enter optical fiber 20 with the y-polarization, and light from optical fiber 10 entering circulator 100 with the y-polarization is directed to enter optical fiber 30 with the y-polarization. The second function is illustrated in FIG. 2b: light from optical fiber 20 entering circulator 100 with the y-polarization is directed to enter optical fiber 40 with the y-polarization, and light from optical fiber 30 entering circular 100 with the y-polarization is directed to enter optical fiber 40 with the x-polarization.--

Please replace the paragraph beginning at page 3, line 29, as with the following amended paragraph:

A3
--Light incident upon PBS 55 with the x-polarization is reflected by PBS 55 in the positive y-direction with the x-polarization. The light traveling in the positive y-direction is reflected by reflector 58 in the positive z-direction, enters non-reciprocal device 26 with the x-polarization, and exits from non-reciprocal device 26 with the y-polarization. The light received from non-reciprocal device 26 passes through polarizer 24, and enters optical fiber 30 20 with the y-polarization.--

Please replace the paragraph beginning at page 5, line 5, as with the following amended paragraph:

AM --As shown in FIGS. 2a 3a and 2b 3b, non-reciprocal device 26 can be constructed with half wave plate ("HWP") 26a and Faraday rotator 26b. HWP 26a can have its optical axis at an angle of 22.5 degrees angle with respect to the x-direction. Faraday rotator 26b can be constructed in such a way that the polarization of a light beam traveling in either the positive z-direction or negative z-direction will be rotated +45 degrees with respect to the positive z-axis.--

Please replace the abstract at page 10 with the following amended abstract:

AS --A four-port circulator includes a polarization beam splitter, a first reflector, a first non-reciprocal device, a second non-reciprocal device, and a second reflector. The first reflector is coupled with the polarization beam splitter. The first non-reciprocal device is coupled to the first reflector. The second non-reciprocal device is coupled to the polarization beam splitter. The second reflector is coupled with the polarization beam splitter.--